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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/479,708	01/07/2000	ALLEN P MILLS JR.	MILLS-11	3424

26345 7590 07/02/2002

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EXAMINER

WARREN, MATTHEW E

ART UNIT PAPER NUMBER

2815

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/479,708

Applicant(s)

MILLS, ALLEN P

Examiner

Matthew E. Warren

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the Amendment filed on March 20, 2002.

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18, 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Prior Art Figure 1 (APAF 1) in view of Tsao (US 5,394,343).

The APAF 1 discloses (pg. 2, line 22 – pg. 4, line 5) a ROM device having a temperature compensation circuit comprising a feedback resistor in which the conductivity is responsive to changes in temperature and a switch (22) to couple the voltage to input word lines (28). The electrical conductive properties of the feedback resistor are the same as the electrical conductive properties of data resistors (30) in the circuit. The ROM uses a plurality of data resistors (points 30) to connect the plurality of

input lines and output lines (40). The material of the data resistor is polysilicon which could be doped or undoped. APAF 1 does not specify that the resistor is metal oxide but it is well known that any material in the realm of semiconductors is resistive material, those resistive materials including metal oxide. Sense amplifiers (42) are coupled to output bit lines (40) wherein the bit lines comprise an operational amplifier having a fixed feedback resistor which is temperature independent. The APAF 1 shows all of the elements of the claims except the temperature compensation circuit having a constant current source coupled to at least one reference resistor. Tsao discloses (col. 5, lines 12-18) a sensor device having a temperature compensation circuit comprising a constant current source coupled to a reference resistor (52) and inherently develops a voltage across the resistor. The compensation circuit comprising the constant current source reduces errors resulting from a change in temperature. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the temperature compensation circuit of the APAF 1 by coupling the circuit to a reference resistor using a constant current source as taught by Tsao to reduce errors resulting from a change in temperature.

Claims 19-22, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 (APAF 1) in view of Suzuki et al. (US 5,544,000).

The APAF 1 discloses (pg. 2, line 22 – pg. 4, line 5) a method of a temperature compensation for ROM device having a temperature compensation circuit comprising a

feedback resistor in which the conductivity is responsive to changes in temperature and a switch (22) to couple the voltage to input word lines (28). The electrical conductive properties of the feedback resistor are the same as the electrical conductive properties of data resistors (30) in the circuit. The ROM uses a plurality of data resistors (points 30) to connect the plurality of input lines and output lines (40). The material of the data resistor is polysilicon which could be doped or undoped. Sense amplifiers are coupled to output bit lines (40) wherein the bit lines comprise an operational amplifier having a fixed feedback resistor which is temperature independent. The APAF 1 shows all of the elements of the claims except the method of maintaining the current comprising supplying the reference voltage to input lines by supplying a constant current to the reference resistor wherein the reference voltage is responsive to a change in temperature. Suzuki et al. discloses (col. 6, lines 20-35) a sensor comprising a method of maintaining a constant current in a temperature compensation circuit by supplying a reference voltage to input lines and the reference voltage is responsive to a change in temperature. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of maintaining the temperature compensation circuit of the APAF 1 by supplying a reference voltage that is responsive to a change in temperature as taught by Suzuki to supply a constant current and ultimately reduce errors resulting from temperature changes.

Response to Arguments

Applicant's arguments filed with respect to claims 1-33 have been fully considered but they are not persuasive. The applicant primarily asserts that the APAF and the cited art do not show all of the elements of the claims and cannot be combined. Particularly, the applicant asserts the cited art does not disclose a reference resistor. The examiner believes that the APAF and cited references do show all of the elements of the claims and are analogous. In particular, the APAF as stated in rejection above, show primarily all the limitations of the claims except the reference resistor and the current source. Tsao discloses a resistor (as a reference resistor) and a constant current source coupled to the resistor to reduce errors resulting from temperature changes in the circuit. Although Tsao deals with tire gauges, the circuit within the gauge is analogous to the applicant's claimed invention. The improvement of Tsao also solves the same problem as stated by the applicant. One of ordinary skill in the art would look to Tsao and realize that the combination of resistor and coupled constant current source improves the effects of temperature change in the circuit. The same argument is made with respect to the APAF and Suzuki. Suzuki deals with a sensor instead of a ROM circuit, however Suzuki mentions the benefits of supplying a reference voltage to resistors in temperature compensation circuits. Because Suzuki deals with temperature compensation, the reference is also analogous. The limitations previously written in the preamble do not make the claims allowable. As stated in the above written rejection, the APAF show that data resistors are used to connect the word and bit lines of the ROM

device. For these reasons, the cited art shows all of the elements of the claims and this action is made final.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (703) 305-0760. The examiner can normally be reached on Mon-Thurs, and alternating Fri, 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 308-7722 for After Final communications.

Application/Control Number: 09/479,708
Art Unit: 2815

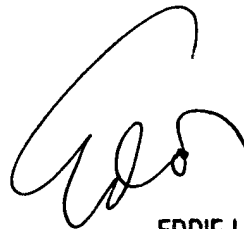
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MEW

Mew

June 28, 2002



EDDIE LEE
SUPERVISORY PATENT EXAMINER
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